

CLAIMS

1. A sound recording device, in particular for a public address system, in which a sound is emitted from a sound source and recorded by at least two sound recorders (2) and transferred to electric signals, characterized in that the sound recorders (2) are arranged at a distance to a reference position (1) which corresponds to the ideal or set-point of the sound source, that directivity vectors (4) between this reference position (1) and the respective sound recorders (2) point in different directions, and that the sound recorders (2) are connected electrically or acoustically to a grouped summation facility (6) for the amplitudes of the signals.

2. A sound recording device according to claim 1, characterized in that the sound recorders (2) display a unified distance from the reference position (1) and are arranged on a circular or spherical element (5), whose center point is created by the reference position (1).

3. A sound recording device according to claim 1, characterized in that when varying distances between the reference position (1) and the sound recorders (2) exist, transmission time elements (8) are provided.

4. A sound recording device according to claim 3, characterized in that when using transmission time elements (8) individual or all the sound recorders (2) are allocated additional sound transfer elements (18), whose transmission dimensions are adjustable to a consistent signal level of all the sound recorders (2).

5. A sound recording device according to one of claims 1 to 4, characterized in that the sound recorders (2) have

directional characteristics and are directed in a manner that the axes of their main receiving directions (3) always point to the reference position (1).

- a 6. A sound recording device according to <sup>claim 16</sup>~~one of claims 1 to 5~~, characterized in that the sound recorders (2) are directly designed as acoustic-electric transducers.
- a 7. A sound recording device according to <sup>claim 16</sup>~~one of claims 1 to 5~~, characterized in that the sound recorders (2) are designed as input valves of acoustic signal transmitters (17), which together can be fed to one or more grouped acoustic-electric transducers.
- a 8. A sound recording device according to <sup>claim 16</sup>~~one of claims 1 to 7~~, characterized in that an optical marking system for the ideal position of the sound source is provided.
6530019. A sound recording device according to claim 8, characterized in that the optical marking system is created by at least two light sources (9), each which emits a characteristic light beam from the sound recorder device in the direction of the set-point of the sound source within a respective predetermined zone for the most favorable sound recording.
- a 10. A sound recording device according to <sup>claim 16</sup>~~one of claims 1 to 9~~, characterized in that the arrangement of the sound recorders (2) and/or their main receiving direction (3) and/or the transmission time of the transmission time elements (8) is adjusted to a change in the set-point of the sound source in such a way, that the reference position (1) of the sound recording device can follow the set-point of the sound source.

11. A sound recording device according to claim 10, characterized in that the configuration of the sound recorders (2) can be displaced and/or swiveled individually or grouped and that a drive (16) can be controlled manually for displacing and/or swiveling, or by way of automatic position recognition of the sound source.

12. A sound recording device according to claim 10, characterized in that the transmission time of the transmission time elements (8) can be controlled manually or with automatic position recognition of the sound source.

a 13. A sound recording device according to <sup>claim 16</sup> ~~one of claims 1 to 12~~, characterized in that the activity and/or the position of the sound source can be determined by a correlator (11), to which the signals of the sound recorders (2) are fed, or that the position of the sound source can be determined by measuring the time delay variances of the zero crossover signals of the various sound recorders.

a 14. A sound recording device according to <sup>claim 16</sup> ~~one of claims 1 to 13~~, characterized in that the electric signals of the acoustic-electric transducers are fed to a digital signal processor after digitalization, which emulates a summation facility (6), transmission time element (8), sound transfer element (18) and/or a correlator (11).

a 15. A sound recording device according to <sup>claim 16</sup> ~~one of claims 1 to 5~~, characterized in that the sound recorders (2) are designed as segments of a one-, two-, or three dimensional directional elongated acoustic-electric transducer, whose surface at least approximately, or in a section, matches a circular or spherical element.

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